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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

SN/T 1513-2005

**Determination of the density for polyethylene resin and
polypropylene resin. Method of standing still in the centre of
immersion liquid at atmospheric temperature**

聚乙烯和聚丙烯树脂密度的测定 常温浮定法

(English Translation)

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Foreword

This standard and domestic and foreign standards for the determination of thermoplastic density ASTM D792, ASTM D1505, ISO 1183, GB 1033 standard the significant differences are as follows.

--- This standard stipulates that the sample density is measured at normal room temperature and then converted to the nominal density at 23 ° C;

--- This standard provides the density-temperature coefficient of low density polyethylene, high density polyethylene and polypropylene resin at 15 ° C ~ 31 ° C.

This standard is proposed and managed by the National Certification and Accreditation Administration.

This standard was drafted. Shanghai Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China.

Introduction

The issuing body of this standard draws attention to the fact that when the statement conforms to this standard, it can be used in relation to "b---Density-temperature coefficient at 15 ° C to 31 ° C.

HDPE 15 ° C ~ 31 ° C is $-0.00045 \text{ g} \cdot \text{cm}^{-3} \cdot ^\circ \text{C}^{-1}$;

LDPE 15 ° C ~ 31 ° C is $-0.00070 \text{ g} \cdot \text{cm}^{-3} \cdot ^\circ \text{C}^{-1}$;

The related patent of PP15°C~31°C is $-0.00030 \text{ g} \cdot \text{cm}^{-3} \cdot ^\circ \text{C}^{-1}$, patent number. 02111273.8.

The issuing body of this standard does not give any opinion on the scope, validity and verification of patents.

The patent holder has assured the issuing authority of this standard that he is willing to work with any applicant on reasonable and non-discriminatory terms and conditions.

Negotiate with an authorized license. In this regard, the patent holder's statement has been filed with the issuing authority of this standard. Relevant information Available from the following address.

Patentee. Shanghai Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China Service inventor. Kong Zhuyao Address. No. 1208, Minsheng Road, Shanghai Please note that in addition to the patents identified above, some of the contents of this standard may involve patents. The issuing body of this standard should not Responsible for identifying these patents.

Determination of density of polyethylene and polypropylene resins Normal temperature floatation

1 Scope

This standard specifies the normal temperature floatation determination method for the density of polyethylene and polypropylene resin.

This standard applies to the density determination of low density polyethylene, high density polyethylene and polypropylene resin.

2 Normative references

The terms in the following documents become the terms of this standard by reference to this standard. Any reference to the year, followed by Modifications (not including errata content) or revisions do not apply to this standard, however, parties to agreements based on this standard are encouraged to study is it possible to use the latest version of these files? For the reference documents that do not date, the latest edition applies to this standard.

ISO 293 Plastics - Compression Molding Thermoplastic Specimens ASTM D1238 extrusion plastometer for measuring the flow rate of thermoplastics ASTM D1928 Standard Method for Molding Polyethylene Test Specimens and Specimens ASTM D2839 Standard Method for Determining Polyethylene Density Using Melt Index Splines

3 Abbreviations

The following abbreviations apply to this standard.

4.1 Principle

According to the buoyancy principle of Archimedes, the sample is immersed in the immersion liquid. When the density of the immersion liquid is greater than the density of the sample, the sample is in the immersion liquid.

Going up, otherwise sinking. When the sample is in a floating state that does not rise or sink in the immersion liquid at a certain temperature, the density of the immersion liquid that is, the density of the sample at this temperature. Then, using the density-temperature coefficient, the density measured at this temperature is converted to a prescribed temperature of 23 ° C.

The density underneath.

4.2 Reagents

4.2.1

Isopropanol, analytically pure.

4.2.2

Distilled water to remove carbon dioxide.

4.3 Main instruments

4.3.1

Glass container, 250 mL beaker with a diameter of 60 mm.

4.3.2

Precision density meter or instrument capable of measuring liquid density, accurate to 0.0001g/cm³.

4.3.3

Thermometer, 0 ° C ~ 50 ° C, the division value of 0.1 ° C.